

Application No.: 09/871,739

Docket No.: H6810.0025/P025

REMARKS

The specification and drawings have been amended, and claims 1, 3, 5, 6, 14-17, 19, 21, 23, 24 and 32-35 have been amended. Claims 1-36 are pending in this case. Applicants reserve the right to pursue the original claims and other claims in this application and in other applications.

The drawings are objected to under 37 C.F.R. § 1.84 as being informal. The Office Action states that reference sign 21 as mentioned on page 11, line 4 and reference sign 38 as mentioned on page 11, line 8 are not included in the figures. Also, the Office Action contends that Figs. 1, 5A and 5B includes reference signs 52, 54, 68 and 69 which are not mentioned in the description. Applicants have amended Fig. 1 and the specification to add the requested reference signs (see amendment to specification and attached replacements sheets). Approval of the drawings changes is respectfully solicited and withdrawal of the rejection is respectfully requested.

Claims 3 and 19-36 are objected to as being informal. The Office Action requested that "an phase-amplitude" on line 2 of claims 3 and 21, be changed to -a phase amplitude--; and "an electron microscope" on line 7 of claims 19, 32 and 35, be changed to -the electron microscope--. Responsive to the Office Action, claims 3 and 21 have been amended to change "an phase-amplitude" to -a phase amplitude--; and claims 19, 32 and 35 have been amended to change "an electron microscope" to -the electron microscope--. Applicants respectfully request that the objection be withdrawn.

Claims 1-36 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully traverse the rejection and request reconsideration. Claims 1, 5-6, 14-17, 19, 23-24 and 32-35 have been amended to overcome the concerns raised in the Office Action. Applicants respectfully request that the rejection be withdrawn.

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The present invention relates to a system for operating an electron microscope such that it can automatically and efficiently determine whether or not a picked up field of view is appropriate for making a search for a target from a specimen, and thereby efficiently extract necessary fields of view. According to one aspect of the invention, a determination is made as to whether a field of view is suitable for observation based on an image condition such as one that indicates the existence of the specimen or the mesh. If a determination is made that the field of view is not suitable for observation, then the system can move to the next position.

Claims 1 and 19 are rejected under 35 U.S.C. § 102 as being anticipated by Ito. Applicants respectfully traverse the rejection and request reconsideration. Claim 1 as amended recites the steps of determining whether an image is suitable for observation based on a calculated degree, and moving the field of view to a next position when a determination is made that the image is not suitable. Claim 19 recites similar features. Ito refers to an auto focus technique that searches for a focus point based on two images obtained by changing a beam condition. Ito fails to teach or suggest the determining and moving steps of amended claims 1 and 19. Accordingly, the rejection of claims 1 and 19 should be withdrawn.

Claims 14, 17, 18, 32, 35 and 36 are rejected under 35 U.S.C. § 102 as being anticipated by Aoyama. Applicants respectfully traverse the rejection and request reconsideration. Claim 14 as amended recites the step of determining whether an image is suitable for observation based on a line profile transmission image, and the step of moving the field of view to a next position when the line profile transmission image has the same level over the image. Claim 32 recites an electron microscope with similar features. Claim 17 recites the steps of determining that an image is suitable when a match is found between a selected pattern and a preset pattern, and moving the field of view to a next position when the match is not found. Claim 35 recites an electron microscope with similar features.

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Aoyama discloses an analytical electron microscope that identifies objects in a sample on the basis of shape, change of thickness, and change of elements. Aoyama fails to teach or suggest the determining and moving steps of claims 14, 17, 32 and 34, as amended. Accordingly, the rejection of claims 14, 17, 32 and 35 should be withdrawn. Claim 18 depends from claim 17, and claim 36 depends from claim 35. Claims 18 and 36 should be allowable along with claims 17 and 35, respectively, for the reasons mentioned above and on their own merits.

Claims 1, 4-13, 15-16, 19, 22-31, 33 and 34 stand rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama in view of Adams. Applicants respectfully traverse the rejection and request reconsideration. Claims 1 and 19 should be allowable over Aoyama for the reasons mentioned above. Adams is cited for a different feature. Adams refers to a system for identifying crystallographic defects in a material by illuminating multiple points on the material and measuring backscatter diffraction images, and comparing the images to determine whether they exceed a predetermined level.

Claims 4-13 depend from claim 1, claims 15 and 16 depend from claim 14, claims 22-31 depend from claim 19, and claims 33 and 34 depend from claim 32, and are allowable over the combination of Aoyama and Adams at least for the reasons described above in connection with claims 1, 14, 19 and 32, and also because Aoyama fails to teach or suggest the respective inventive combinations defined by claims 4-13, 15-16, 22-31 and 33-34.

Claims 2 and 20 are rejected under 35 U.S.C. § 103 as being unpatentable over Ito in view of Dougherty (U.S. Patent No. 3,700,801). Applicants respectfully traverse the rejection and request reconsideration. Claims 2 and 20 should be allowable along with claims 1 and 19, respectively, and for other reasons.

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Claim 3 and 21 are rejected under 35 U.S.C. § 103 as being unpatentable over Ito in view of Van Dijck. Applicants respectfully traverse the rejection and request reconsideration. Claims 3 and 21 should be allowable along with claims 1 and 19, respectively, and for other reasons.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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